



Appendix H

Forms

Introduction

Included in this appendix are the standard forms you will use to keep a record of the activities comprising the PHM biological control program. For guidance in using the forms, refer to the appropriate section of the manual.

The following pages have been printed without headers, footers, or page numbers so that you can reproduce the forms locally as needed.



To make sure that you maintain a complete set of blank master forms, **copy the forms as you need them and leave the originals in your binder!**

The following is a list of included forms:

- ◆ **Form PHM-1:** Mealybug Survey: Visual—Collection of Adult Females and Various Instars
- ◆ **Form PHM-2:** Mealybug Survey: Sex Pheromone Trap—Adult Males
- ◆ **Form PHM-3:** Japanese Pumpkin Harvest Records
- ◆ **Form PHM-4:** Pink Hibiscus Mealybug Insectary Culture: Daily Operation
- ◆ **Form PHM-5:** Host Infestation Records
- ◆ **Form PHM-6:** Natural Enemy Foreign Shipment Receiver's Report
- ◆ **Form PHM-7:** Laboratory Temperature and Relative Humidity Daily Records
- ◆ **Form PHM-8:** Parasite/Predator Production Records/Cage
- ◆ **Form PHM-9:** Summary of Parasite/Predator Production Records/ Cage
- ◆ **Form PHM-10:** Summary of Monthly Parasite/Predator Production Records/Species
- ◆ **Form PHM-11:** Parasite Release Data
- ◆ **Form PHM-12:** Summary of Monthly Parasite/Predator Releases on Pink Hibiscus Mealybug
- ◆ **Form PHM-13:** Predator Release Data: *Cryptolaemus montrouzieri*

- ◆ **Form PHM-14 (Part 1)** and **Form PHM-14 (Part 2)**: Percent Parasitization Data
- ◆ **Form PHM-15**: Summary: Percent Parasitization of Pink Hibiscus Mealybug
- ◆ **Form PHM-16 (Part 1)**: Percent Hyper-parasitization Data
- ◆ **Form PHM-17**: Beat-Sheet Field Samples: *Cryptolaemus montrouzieri*
- ◆ **Form PHM-18**: Pink Hibiscus Mealybug: Population Density Count Data
- ◆ **Form PHM-19**: Summary of Pink Hibiscus Mealybug Population Density Counts

[illegible]

Mealybug Survey

Sex Pheromone Trap—Adult Males

[illegible]

Japanese Pumpkin Harvest Records

[illegible]

Pink Hibiscus Mealybug Insectary Culture Daily Operation

[illegible]

HOST INFESTATION RECORDS**Host (Check)**☐ Pumpkin ☐ Potato ☐ Squash

Event	Date
Host infested with crawlers (or eggs)	
Host removed for crawler or parasite/ predator production	

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Event	Date
Host infested with crawlers (or eggs)	
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Event	Date
Host infested with crawlers (or eggs)	
Host removed for crawler or parasite/ predator production	

HOST INFESTATION RECORDS**Host (Check)**☐ Pumpkin ☐ Potato ☐ Squash

Event	Date
Host infested with crawlers (or eggs)	
Host removed for crawler or parasite/ predator production	

Natural Enemy Foreign Shipment Receiver's Report

Date received _____ Condition of shipment _____

Examined by _____ Source of material (name) _____

Source location _____

[illegible]

**Laboratory
Temperature and Relative Humidity
Daily Records**

Room: _____

Date	Time	Temperature			Relative Humidity
		Current	Minimum	Maximum	

Parasite/Predator
Production Records/Cage

Species: _____

Cage #: _____

Origin: _____

Date of Sting:_____

Number Released in Sting: _____

Host Material and Number: _____

[illegible]

Parasite/Predator Production Records/Cage

Species: _____

Cage #: _____

Origin: _____

Date of Sting: _____

Number Released in Sting: _____

Host Material and Number: _____

[illegible]

[illegible]

Summary of Monthly Parasite/Predator Production Records/Species

Species: _____ Origin: _____ Month: _____

[illegible]

Parasite Release Data

Anagyrus kamali #1
Gyranusoidea indica #2
Leptomastix sp. #3

[illegible]

Summary of Monthly Parasite/Predator Releases on Pink Hibiscus Mealybug

Country _____
 Month_____ Year _____

Biocontrol Agent	Dates Released	Total Number of Properties	Total Number Released
<i>Anagyrus kamali</i> (China)			
<i>Anagyrus kamali</i> (Hawaii)			
<i>Gyranusoidea indica</i> (Egypt)			
<i>Leptomastix</i> sp.			
<i>Anagyrus dactylopli</i> (China)			
<i>Cryptolaemus montrouzieri</i>			
Total			

Predator Release Data

Cryptolaemus montrouzieri

[illegible]

Percent Parasitization Data (Encapsulated Live 2nd, 3rd, and Adult Female Mealybugs)

Site No: _____ Location: _____

Date Collected: _____ Date Released: _____

Cap No.	Species	Unemerged Mummy	Number Emerged Parasites		Cap No.	Species	Unemerged Mummy	Number Emerged Parasites	
			♀	♂				♀	♂
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Percent Parasitization Data (continued)

Site No: _____ Location: _____

Date Collected: _____ Date Released: _____

Cap No.	Species	Unemerged Mummy	Number Emerged Parasites		Cap No.	Species	Unemerged Mummy	Number Emerged Parasites	
			♀	♂				♀	♂
51					76				
52					77				
53					78				
54					79				
55					80				
56					81				
57					82				
58					83				
59					84				
60					85				
61					86				
62					87				
63					88				
64					89				
65					90				
66					91				
67					92				
68					93				
69					94				
70					95				
71					96				
72					97				
73					98				
74					99				
75					100				
Total									

Summary
Parasitization of Pink Hibiscus Mealybug
Anagyrus kamali #1
Gyransoidea indica #2
Leptomastix sp #3

[illegible]

Percent Hyper-Parasitization Data (Encapsulated Mealybug Mummies Only)

Site No: _____

Location: _____

Date Collected: _____

Date Released: _____

Cap No.	Species	Unemerged Mummy	Number Emerged Parasites		Cap No.	Species	Unemerged Mummy	Number Emerged Parasites	
			♀	♂				♀	♂
1					26				
2					27				
3					28				
4					29				
5					30				
6					31				
7					32				
8					33				
9					34				
10					35				
11					36				
12					37				
13					38				
14					39				
15					40				
16					41				
17					42				
18					43				
19					44				
20					45				
21					46				
22					47				
23					48				
24					49				
25					50				

Percent Hyper-Parasitization Data (continued)

Site No: _____

Location: _____

Date Collected: _____

Date Released: _____

Cap No.	Species	Unemerged Mummy	Number Emerged Parasites		Cap No.	Species	Unemerged Mummy	Number Emerged Parasites	
			♀	♂				♀	♂
51					76				
52					77				
53					78				
54					79				
55					80				
56					81				
57					82				
58					83				
59					84				
60					85				
61					86				
62					87				
63					88				
64					89				
65					90				
66					91				
67					92				
68					93				
69					94				
70					95				
71					96				
72					97				
73					98				
74					99				
75					100				
Total									

Collector's Name:

Pink Hibiscus Mealybug—Population Density Count Data (6" Hibiscus Terminals)

Location	Date	Twig Sample No (1-4)	Egg Mass		# 2nds	# 3rds	# Adult ♀	# Adult ♂	Total # Egg Mass	Total # 2nd to Adult	Cryptolaemus		No. Mummies	
			Eggs	Eggs + Crawlers							Larvae	Adults	Exit Holes	No Exit Holes
		1												
		2												
		3												
		4												
Total		↑												
Average		↑												
		1												
		2												
		3												
		4												
Total		↑												
Average		↑												
		1												
		2												
		3												
		4												
Total		↑												
Average		↑												

Host Plant: _____ Location: _____

[illegible]

